

State of Alaska FY2003 Governor's Operating Budget

Department of Transportation/Public Facilities Construction and CIP Support Budget Request Unit Budget Summary

Construction and CIP Support Budget Request Unit

Contact: Boyd J. Brownfield, Deputy Commissioner

Tel: (907) 465-6973 **Fax:** (907) 586-8365 **E-mail:** Boyd_Brownfield@dot.state.ak.us

BRU Mission

The mission of the Construction and CIP Support division is to improve the transportation system in Alaska and protect the health and safety of the people of Alaska by constructing safe, environmentally sound, reliable and cost effective highways, airports, harbors, docks, and buildings.

BRU Services Provided

Each Construction and CIP Support component reports to a different region, and the services provided may vary from region to region. The following information is typical of services provided. See individual components for detail.

Construction Branch: Administers construction contracts, provides field inspection and construction oversight, provides quality assurance that construction documentation and materials are in conformance with contract requirements during construction and closeout of projects, and reports Disadvantaged Business Enterprises/Minority Business Enterprise activity on construction projects.

Contracts Branch: The Construction Contract Unit reviews construction documents, provides bid packages, advertises and awards contracts, prepares certified bid tabulations, and helps resolve bidding disputes. The Professional Services Agreement Unit coordinates, solicits, selects, prepares and administers Professional Services agreements.

Project Control Branch: Coordinates and programs project funding, administers state and federal grants, provides engineering management support, prepares and manages the component's operating budget, develops, enhances, maintains Oracle management reporting system for capital projects, provides regional network administration and desktop computer support, and processes time and equipment charges to projects.

BRU Goals and Strategies

To improve the transportation system and public facilities in Alaska:

Advertise, award, and administer construction contracts for roads, airports, and facilities efficiently and in

- accordance with department policies and procedures.
- Construct and complete all projects on time and within budget.
- Prepare project documentation and provide construction administration in conformance with all laws, regulations, and
- requirements to ensure continuing federal funding.

To protect the health and safety of the people of Alaska:

Ensure Americans with Disabilities Act (ADA) requirements are incorporated into all projects.

Identify and correct existing safety related problems on road and facilities projects.

Key BRU Issues for FY2002 – 2003

TEA-21 has increased the level of Federal Highway Administration (FHWA) funds nationwide, creating competition across the country for trained and experienced engineering personnel. The State's salary levels for engineers have made it difficult to hire and retain experienced personnel, however wages were recently increased for many of our engineers and we are still waiting to see how effective that action was.

Increased security measures at airports will involve a more detailed and costly screening process prior to security badges being issued for all personnel that work on the airport. This will involve all state personnel assigned to airport projects, as well as contractors. Construction staff will probably be required to attend a more in depth training process before working in and around the airport. Access to the airport by construction equipment will be restricted to specific secured gates that will need to be manned by state or contractor personnel at all times during the work day. The construction of heated, portable guard stations may be necessary.

The department jointly with the FHWA and the FAA created a task force to streamline the closeout process. The task force developed consistency in several aspects of FHWA and FAA closure paperwork, implementing a tracking system and notification system to ensure the priority of closing out projects. The task force eliminated documentation required by the Right of Way section that was redundant. There is an on going commitment to paperwork reduction and improved processes.

Major BRU Accomplishments in 2001

- Received \$208.1 million in federal highway construction authorization in FFY01.
- Received \$100.3 million in federal aviation authorization in FFY00 for construction.
- Awarded contracts for \$11.9 million in International Airport Revenue Fund, general fund, and reimbursable projects in FY01.
- Paved 286.4 lane miles of gravel road.

Emphasized safety awareness through greater communication with public, through various forms of media (public exhibits, workshops, newspaper advertisements). The Department entered into local police departments for officer presence at construction sites during peak traffic hours, enforcing compliance with speed limits.

Key Performance Measures for FY2003

Measure:

Percentage of the total construction costs that were spent on contract administration.
Sec 145(b)(1) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

The percentage of contract administration costs for closed projects during FY01 were as follows:

	Highways	Aviation
Central Region	14.6%	11.0%
Northern Region	14.7%	25.7%
Southeast Region	12.5%	27.8%

Southeast Region's Aviation percentage only reflects 3 closed out projects, one of which was a consultant administered project. That causes the number to be high. The overall percentage for that region is below 15%, because many more highway projects were closed than aviation projects.

Benchmark Comparisons:

There is no established benchmark at this time. However, up until recently the FHWA had a benchmark of 15%, which has been considered an industry standard.

Background and Strategies:

This measure can only be accurately determined after the project is closed and all project charges are accounted for. The Department closed out 105 projects during FY01. Historically, contract administration costs run at about 14.5%. The high percentage recorded in FY01 is caused by closed projects not representing the typical size and complexity of projects normally closed out in a year.

This measure is always a challenge because of the remoteness of most of the projects (increasing travel and transportation costs), and because the requirements of the federal funding agencies and the expectations of the traveling public tend to increase over time. All of these factors drive administrative costs up. This measure will change from year to year based on the type and size of projects completed. Small urban projects may require the same level of oversight, i.e. staff, as large rural projects. Projects that consist primarily of asphalt paving are typically completed in a short time resulting in low engineering costs compared to the contract value. The need to supplement regional staff with consultants will have a direct impact on future construction engineering costs.

In FY02, a Statewide task force of members from DOT&PF in conjunction with FHWA and FAA developed a method to streamline the closeout process of federal projects. This should further reduce contract administration costs. We are also continuing the effort to reduce our contract administration costs by utilizing staff as efficiently as possible, for example using one construction engineer to manage multiple small projects, thus reducing the engineering costs for each individual project.

Measure:

Percentage of the total construction costs that were spent on change orders.

Sec 145(b)(2) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

The percentage of change order costs for closed projects during FY01 were as follows:

	<u>Highways</u>	<u>Aviation</u>
Central Region	5.7%	5.6%
Northern Region	6.3%	7.0%
Southeast Region	5.8%	5.0%

Benchmark Comparisons:

There is no established benchmark at this time. However, past internal policy was to keep total contract adjustments, including change orders and quantity overruns, at less than 10%.

Background and Strategies:

This measure can only be accurately determined after the project is closed and all project charges are accounted for. Historically, total contract adjustments, including change orders and quantity overruns, run at about 5.4%.

This measure is always a challenge because: 1) efforts to reduce design costs inevitably result in an increase in construction change order costs and quantity overruns; 2) local governments, utilities, and maintenance forces often don't recognize needed enhancements or utility adjustments until the projects are underway; and 3) upper management sometimes isn't aware of opportunities for enhancements until the projects are under construction. All of these factors are beyond the control of this construction program.

Measure:

The number of miles of gravel roads that are surfaced with chip seal, hot mix, or high float asphalt for the first time, reported regionally.

Sec 149(b)(1) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

The number of lane miles of gravel road surfaced with chip seal, hot mix or high float asphalt for the first time during FY01 is as follows:

	by Highways & Aviation	by Construction	Total (lane miles)
Central Region	32	40	72
Northern Region	8	236.4	244.4
Southeast Region	5	10	15
TOTAL	45	286.4	331.4

Benchmark Comparisons:

We are unaware of any specific benchmark at this time. Number of miles of roads that are surfaced is dependent upon amount of funds budgeted through the STIP.

Background and Strategies:

The Road Paving Program established in State Fiscal Year 99 implements the Administration's goal of reducing maintenance costs and improving the quality of life for Alaskans by hard surfacing state owned/maintained Non

National Highway System (NHS) gravel roads, as well as those NHS roads also identified under the Statewide Transportation Improvement Program (STIP). The scope of this work represents limited shoulder work, drainage and other work related to preserving the road structure. This is an extremely important program and will provide great benefit to many Alaskans. The Department of Transportation and Public Facilities also benefits directly from this program through reduced maintenance costs. Roads are selected for this program based on cost, condition of the roads, and traffic levels.

Measure:

The total construction cost of the annual highway and aviation programs should be within 5% of the contract bid amount.

Alaska's Target & Progress:

Out of a representative random sample of 105 projects completed in FY01, the total percentage change from contract bid to completion was approximately 6.1%. This is an improvement over FY00, which was 7%. Central Region Construction and CIP Support reported for FY01 an aggregate percentage change from contract bid to final contract of 2.4%.

Benchmark Comparisons:

No benchmark is known. A review of other states will be conducted to determine if similar information is collected and used for management purposes.

Background and Strategies:

Currently, the department is working on over 441 active construction projects that span several construction seasons. Significant to the cost of urban projects are traffic maintenance costs necessary for a project to have a minimal impact on the travelling public, heavy public input during the construction of a project, and safety, pedestrian, and environmental considerations. Scope changes during construction are rare, and are undertaken only where there is a substantial advantage to the public, the potential of a significant lost opportunity, a safety consideration and/or a major environmental issue.

Contracts allow specific relief for changed conditions that could not be foreseen, forces of nature, and/or unusually severe weather. Due to these factors, specific projects will occasionally have cost overruns. To decrease contract overruns, some combination of the following is necessary: improve estimating quantities in bid documents, make more field changes that reduce quantities and costs, make fewer field changes that increase quantities or cost, or decline performing extra work requested by others (e.g., local governments, other agencies).

It is also important to note that because large-dollar projects generally take longer to build and usually have more significant environmental and community impacts than the majority of federal-aid highway projects, they have greater potential to experience substantial cost increases and lengthy construction delays. The Public Facilities Branch typically provides design and construction administration services for other state client agencies. During the course of construction these client agencies may direct additional work be performed, making the stated performance measure out of the control of Department personnel.

Construction and CIP Support
BRU Financial Summary by Component

All dollars in thousands

	General Funds	FY2001 Actuals Federal Funds	Other Funds	Total Funds	General Funds	FY2002 Authorized Federal Funds	Other Funds	Total Funds	General Funds	FY2003 Governor Federal Funds	Other Funds	Total Funds
<u>Formula</u>												
<u>Expenditures</u>												
None.												
<u>Non-Formula</u>												
<u>Expenditures</u>												
Central	254.5	0.0	11,849.2	12,103.7	255.6	0.0	13,660.0	13,915.6	258.5	0.0	15,018.6	15,277.1
Construction & CIP												
Northern	309.5	0.0	10,002.0	10,311.5	309.1	0.0	11,143.0	11,452.1	413.0	0.0	11,788.0	12,201.0
Construction & CIP												
Southeast	176.9	0.0	4,756.2	4,933.1	178.2	0.0	4,224.7	4,402.9	182.7	0.0	4,485.0	4,667.7
Region Construction												
Totals	740.9	0.0	26,607.4	27,348.3	742.9	0.0	29,027.7	29,770.6	854.2	0.0	31,291.6	32,145.8

Construction and CIP Support**Proposed Changes in Levels of Service for FY2003**

Last year the Department received increase federal funding for highways, \$80 million in two special appropriations, and a substantial increase, \$60 million, in the FAA Airport Improvement Program. The high level of federal funding, plus more special appropriations, is expected to continue. Congress may add funds for security purposes and as part of an economic stimulus package. Changes to service levels are driven by congressional appropriations and may require additional resources in order to deliver the projects funded. The department has added additional engineering positions to accomodate recent and anticipated growth in federal programs.

Construction and CIP Support**Summary of BRU Budget Changes by Component****From FY2002 Authorized to FY2003 Governor***All dollars in thousands*

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
FY2002 Authorized	742.9	0.0	29,027.7	29,770.6
Adjustments which will continue current level of service:				
-Central Construction & CIP	2.9	0.0	340.2	343.1
-Northern Construction & CIP	3.9	0.0	221.5	225.4
-Southeast Region Construction	4.5	0.0	105.3	109.8
Proposed budget increases:				
-Central Construction & CIP	0.0	0.0	1,018.4	1,018.4
-Northern Construction & CIP	100.0	0.0	423.5	523.5
-Southeast Region Construction	0.0	0.0	155.0	155.0
FY2003 Governor	854.2	0.0	31,291.6	32,145.8